



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IX

75 Hawthorne Street  
San Francisco, Ca. 94105-3901

**SUPERFUND REMEDIAL ACTION REPORT**  
(First Operable Unit)

Phoenix-Goodyear Airport Area Superfund Site  
Goodyear, Arizona

September 1993



**I. INTRODUCTION**

This Remedial Action Report documents that the first operable unit at the Phoenix-Goodyear Airport (PGA) Area Superfund site is operational and functional in accordance with OSWER Directive 9320.2-3C. The U.S. Environmental Protection Agency (EPA) and the Arizona Department of Environmental Quality (ADEQ) conducted an inspection on March 12, 1993, and determined that the remedy required by the September 1987 Record of Decision for the PGA site has been constructed and is operating in accordance with EPA-approved remedial design (RD) plans and specifications.

**II. SUMMARY OF SITE CONDITIONS**

**Site Setting**

The PGA Superfund Site is located about 17 miles due west of Phoenix. Attachment #1 illustrates the site location. The PGA site lies entirely within the jurisdiction of the City of Goodyear. Land use on and near the site includes agriculture, residential, and commercial development. The general area within a radius of about 5 miles had a combined population of about 30,00 people in 1985.

The two major surface-water drainages within the area are the Gila River to the south and Agua Fria River to the east. The Gila River flows primarily due to releases from wastewater treatment plants. The Agua Fria River is dry most of the year with occasional flows resulting from releases from dams, irrigation tailwaters, or treatment plants. The Agua Fria drains south into the Gila River, which then flows to the west.

Area drinking water supplies, industrial water supplies, and irrigation water come solely from groundwater that is pumped from the alluvial deposits of the western Salt River Valley underlying the entire area. Attachment #2 presents the stratigraphy of the upper alluvium geologic unit (UAU). The saturated portion of the UAU is layered into three subunits of groundwater designated A, B, and C. Subunit A, the first saturated unit, is considered non-

potable due to total dissolved solids content averaging around 3000 parts per million (ppm). Subunit A groundwater is used locally for some industrial and agricultural uses. Subunit B is a leaky aquitard and, therefore, is a poor producer of groundwater. Subunit C groundwater has many beneficial uses, including drinking water and irrigation.

Due to heavy agricultural pumping of Subunits A and C north and south of the site, the groundwater flow for both Subunit A and C divides into northwest and southwest directions along Yuma Road. EPA uses this groundwater divide along Yuma Road to split the site into distinct northern and southern portions.

The south portion of the site (PGA-south) contains the Loral Corporation facility property, the Phoenix-Goodyear Airport property, and any area with groundwater contamination in concentrations above site clean-up standards emanating from these properties. The Loral property was formerly owned and operated by Goodyear Aerospace Corporation, a subsidiary of the Goodyear Tire and Rubber Company. The airport property was formerly owned and operated by the U.S. Navy.

The north portion of the site (PGA-north) is comprised of the Unidynamics-Phoenix Incorporated (UPI) property and all areas with groundwater contamination above site clean-up standards emanating from the UPI property.

These three properties (Loral, airport, and UPI) have been identified as sources of soil and groundwater contamination at the PGA site. Although a variety of volatile organic compounds (VOCs) have been detected above background, primary contaminants are trichloroethylene (TCE), acetone and methyl ethyl ketone (MEK) at PGA-north; and, TCE, dichloroethylene (DCE), and chromium at PGA-south. It appears that most of the disposal activities occurred during the 1940-70's via solvent degreasing and other manufacturing operations at each of the three facilities.

#### Potentially Responsible Parties

A search for potentially responsible parties (PRPs) was conducted in 1985 during the Remedial Investigation. The following PRPs have been informed of their liability under CERCLA by special notice letters:

##### PGA-south:

Goodyear Tire and Rubber Company (Goodyear). Goodyear was a generator and an owner/operator at the time of disposal. Goodyear received special notice letters on September 3, 1987 for PGA-south Operable Unit (OU) Remedial Design/Remedial Action RD/RA); on March 2, 1990 for PGA-south final remedy

RD/RA; and on July 15, 1991 for a non-time critical removal action.

Department of Defense (DOD). By the actions of the U.S. Navy, DOD was a generator and an owner/operator at time of disposal. The DOD is represented by the U.S. Army Corps of Engineers at this site. The Army Corps received special notice letters on September 3, 1987 for the PGA-south OU RD/RA and on March 2, 1990 for PGA-south final remedy RD/RA.

Loral Defense Systems - Arizona (Loral). Loral is a current owner. Loral received special notice letters on March 2, 1990 for the PGA-south final remedy RD/RA and on July 15, 1991 for a non-time critical removal action.

City of Phoenix (COP). COP is a current owner. COP received a special notice letter on March 2, 1990, for the PGA-south final remedy RD/RA.

#### PGA-north:

Unidynamics-Phoenix Incorporated (UPI). UPI was a generator and owner/operator at time of disposal and is a current owner. UPI received a special notice letter on April 2, 1990 for the PGA-north final remedy RD/RA.

#### Background to the First Operable Unit

An operable unit (OU) is a remedial action that is separated from and commenced in advance of the overall site cleanup actions when such remedial action is cost-effective, protective of human health and the environment, and consistent with the final site remedy. During the Remedial Investigation/Feasibility Study (RI/FS) for this site, EPA determined the Subunit A groundwater at PGA-south to be an OU. EPA's rationale for this OU included the following:

(a) the need for containment of contamination within Subunit A to prevent further contaminant migration, both laterally within Subunit A and vertically downward into Subunit B/C; and, (b) PGA-south PRPs' willingness to begin clean-up activities.

Contamination in PGA-south Subunit A groundwater consisted primarily of total chromium at levels up to 1,340 parts per billion (ppb) and trichloroethylene (TCE) at levels up to 7,900 ppb. A list of the contaminants detected in PGA-south Subunit A groundwater are provided in Attachment #3.

In its first Record of Decision (ROD) for this site, dated September 1987, EPA selected a groundwater pump and treat system for the PGA-south Subunit A groundwater operable unit. The ROD states that water from PGA-south Subunit A groundwater will be drawn and treated until contaminant levels are reduced to meet the

specified clean-up levels (see Attachment #3). In addition, the ROD requires that extracted Subunit A water shall be treated by air stripping technology to levels less than the clean-up levels and then reinjected back into Subunit A. EPA's selected remedy is also required to have emissions controls, such as activated carbon units to capture the airborne contaminants emanating from the air stripping treatment unit. Since the ROD did not require a treatment unit for chromium contamination in the groundwater, as long as the reinjected water at the OU continues to meet the clean-up level for chromium, no specialized chromium treatment unit is required.

Since EPA's issuance of the 1987 ROD, EPA and the PGA-south PRPs undertaking the OU remedial action agreed to add several additional Subunit A clean-up levels. These clean-up levels apply to both reinjection of treated water from the OU treatment system and ultimate in-situ groundwater restoration. Attachment #3a provides a list of the Subunit A clean-up levels to date. In addition, it is expected that EPA and the PGA-south PRPs will soon finalize their agreement to the following Subunit A clean-up levels for OU treated water reinjection: benzene - 5ppb, ethylbenzene - 700 ppb.

#### Remedial Design and Construction Activities

As a result of an EPA enforcement action commenced in 1987, EPA and the Goodyear Tire and Rubber Company (Goodyear) signed a consent decree in 1988 (Civil Action Number 88-1443 PHX EHC) which required Goodyear to implement the 1987 ROD.

Shortly after the signing of the consent decree, EPA approved Goodyear request to design and construct the OU in two phases. Phase 1, which consisted of five extraction wells, five injections wells, one air stripping tower, and related piping and facilities, began operation in December 1989. Phase 2 primarily consisted of connecting four new extraction wells and nine new injection wells to the Phase I system. In addition, a new stripping tower (fiberglass instead of stainless steel), a bigger air blower (5 Horsepower instead of 15 Horsepower), and a vapor-phase granular activated carbon (GAC) air emissions controls system with on-site regeneration were also implemented as part of Phase 2 work. In general, Goodyear used ICF Technology Incorporated as its remedial design contractor for phases I and II and remedial action contractor for phase I. Bartholomew Engineering Incorporated was hired by Goodyear to oversee the construction of various Phase 2 remedial action contractors hired directly by Goodyear. EPA oversight contractors consisted of CH2M Hill during Phase 1 and URS Consultant Inc. for Phase 2.

A list of the primary EPA-approved RD documents are provided in Attachment #4. Attachment #5 provides drawing of the layout of the OU as of June 15, 1993. All Phase 2 facilities were in operation



by the end of 1992.

As a result difficulties encountered during Phase 1 and 2 RD/RA activities, the following lessons were learned:

- 1) Complete pilot borings for extraction and injection wells as two inch piezometers to assist with well effectiveness analysis regarding hydraulic capture during remedy operation.
- 2) Carefully analyze the lithologic logs and water quality samples from extraction and injection well pilot boring prior to deciding final location and expected efficiency of each well.
- 3) Use corrosive-proof plumbing fixtures throughout the acid injection system. An all teflon piping system is now being used successfully.
- 4) Injection wells of 36 inches in diameter with screens beginning above and throughout Subunit A groundwater provide much superior capacity compared with 8 inch injection wells of standard design.
- 5) Stainless steel air stripping tower leaked at the base due to incongruent metal types and pit corrosion. A replacement tower built of fiberglass has been successful.
- 6) Goodyear has had to run several tests of the air stripping tower in an effort to improve tower efficiency. Less than anticipated tower efficiency continues to be a concern to both EPA and ADEQ but Goodyear's studies have not determined a primary factor for this problem. It appears that the design of water distributor plate at the top of the tower may be significantly effecting air stripping tower efficiency. More studies on this issue and modifications to the stripping tower may be warranted in the future.

By early 1993, all RD/RA construction required by the 1987 ROD and the 1988 consent decree had been completed, and both OU Phases 1 and 2 were operational and functional. Nonetheless, Goodyear embarked on one of two EPA-authorized OU enhancement programs on its own accord in early 1993. Goodyear and EPA informally agreed through written correspondence to modify and improve the OU in order to increase hydraulic capture of the contaminant plume and thereby reduce overall anticipated remediation time.

Construction for the first enhancement program, which consisted of connection of one additional extraction well known as E-11, was completed in March 1993. The second OU enhancement program is currently under design by Goodyear and consists of abandoning well E-8, a poorly producing extraction well, and the construction two new extraction wells. On-site construction of the second enhancement program is expected to commence in late 1993. The

changes to the OU created by the first enhancement program have been documented in the OU Operation and Maintenance Manual. Once completed similar modification to the OU O&M Manual will be made for the second OU enhancement program. Since this work is not necessarily required by the 1988 consent decree and is being done voluntarily by Goodyear, no detailed remedial design documents are being required for the enhancement program work. However, Goodyear and EPA do consult and agree upon the location and general design requirements of any OU enhancement work.

### III. DEMONSTRATION OF QUALITY ASSURANCE/QUALITY CONTROL DURING CLEANUP ACTIVITIES

All procedures and protocol followed for soil and water sampling and analysis during pre-design activities are documented in reports in the PGA site file. A Quality Assurance Project Plan (QAPjP) was prepared in conjunction with pre-design, construction, and O&M work activities. These QAPjPs are consistent with the requirements of EPA's Interim Guidelines and Specifications for Preparing Quality Assurance Project Plans (QAM-005/80).

### IV. OPERATION AND MAINTENANCE OF THE OPERABLE UNIT

Attachment #6 provides a list of documents which together constitute the Final Operation and Maintenance Plan (O&M Plan) for the OU. The O&M Plan is the controlling document that dictates the appropriate operation, maintenance, and monitoring work Goodyear must carry out until the requirements of the ROD are satisfied. With respect to monitoring work, Attachment #7 summarizes the OU sampling activities required of Goodyear. In addition, it is Goodyear's responsibility to keep the O&M Plan up to date. Any modifications to the O&M Plan, including modifications caused by Goodyear's OU enhancement work, must be submitted for EPA review and approval.

EPA and ADEQ have made quarterly informal inspections of the OU since OU start-up in December 1989. On March 12, 1993, the OU was formally inspected by EPA and ADEQ for compliance with all requirements of the ROD, RD documents, and O&M Plan. During June 1992, EPA and ADEQ staff observed Goodyear's compliance with the QAPjP for the groundwater sampling activities required by the O&M Plan. EPA also took groundwater split samples. Inspection for QAPjP compliance and split sampling activities were repeated by EPA in June of 1993 and another similar EPA inspection is scheduled for June 1994. A Copy of the report documenting EPA's March 12, 1993 inspection is provided in Attachment #8.

The PGA-south Subunit A Groundwater OU is currently in the Long-term Response Action (LTRA) phase, as described for the LTRA subcategory of the Construction Completion category of the National

Priorities List. The ROD estimated that Subunit A groundwater clean-up levels would be achieved after a period of 37 years of OU operation. Therefore, if the OU remains in continuous operation and anticipated OU clean-up effectiveness is achieved, the OU may cease operations in the year 2027.

#### V. SUMMARY OF FIVE YEAR REVIEW STATUS

Section 121(c) of the Comprehensive Environmental Response, Compensation, and Liability Action (CERCLA) requires that EPA review, no less often than each five years, any remedial action selected that results in any hazardous substances, pollutants, or contaminants remaining at the site. The ROD for the PGA-south OU contains groundwater clean-up standards that, when attained, will allow unlimited use and unrestricted exposure. Therefore, a five-year review would no longer be required after such time.

OSWER Directive 9355.7-02 ("Structure and Components of the Five-Year Reviews", May 23, 1991) provides that EPA will conduct five-year reviews as a matter of policy ("Policy Reviews") at sites where hazardous substances will remain above levels that allow unlimited use and unrestricted exposure after completion of construction of the remedial action, but the cleanup levels specified in the ROD will require five or more years to attain.

Based on revised five-year policy review procedures, the PGA-south Subunit A OU is expected to be subject to an initial five-year policy review no earlier than 1998. At that time, EPA, in consultation with ADEQ, will determine whether human health and the environment are being protected adequately by the remedial action being implemented.

#### VI. PROTECTIVENESS

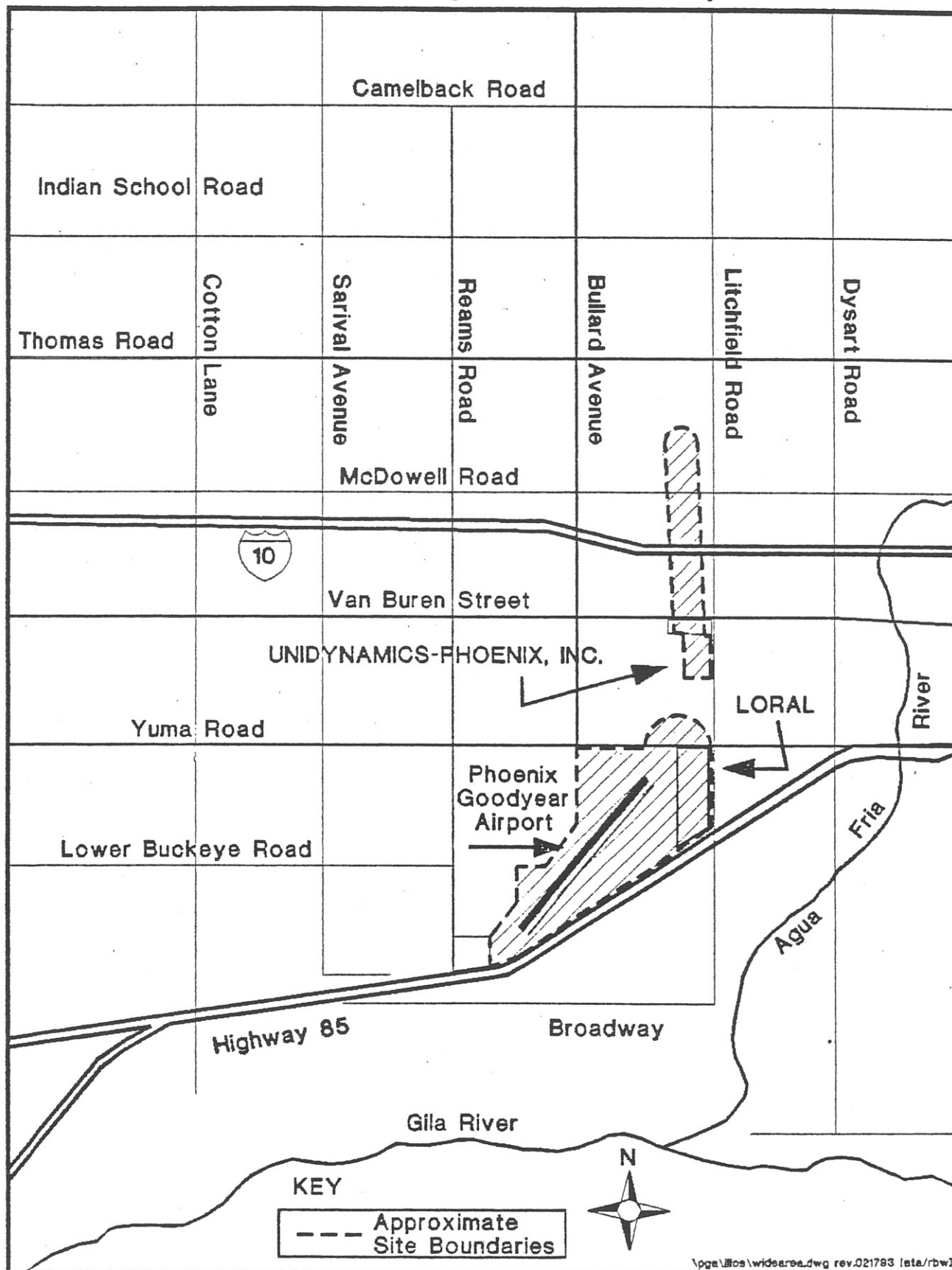
This OU Remedial Action Report will be amended when all ROD cleanup objectives have been achieved, and confirmatory groundwater sampling demonstrates that the PGA-south Subunit A groundwater contamination no longer poses an unacceptable threat to human health and the environment.

Approved By:

Nancy Lindsay  
Branch Chief  
Superfund Enforcement Branch

Date

## Approximate Boundaries of Phoenix Goodyear Airport Area Superfund Site





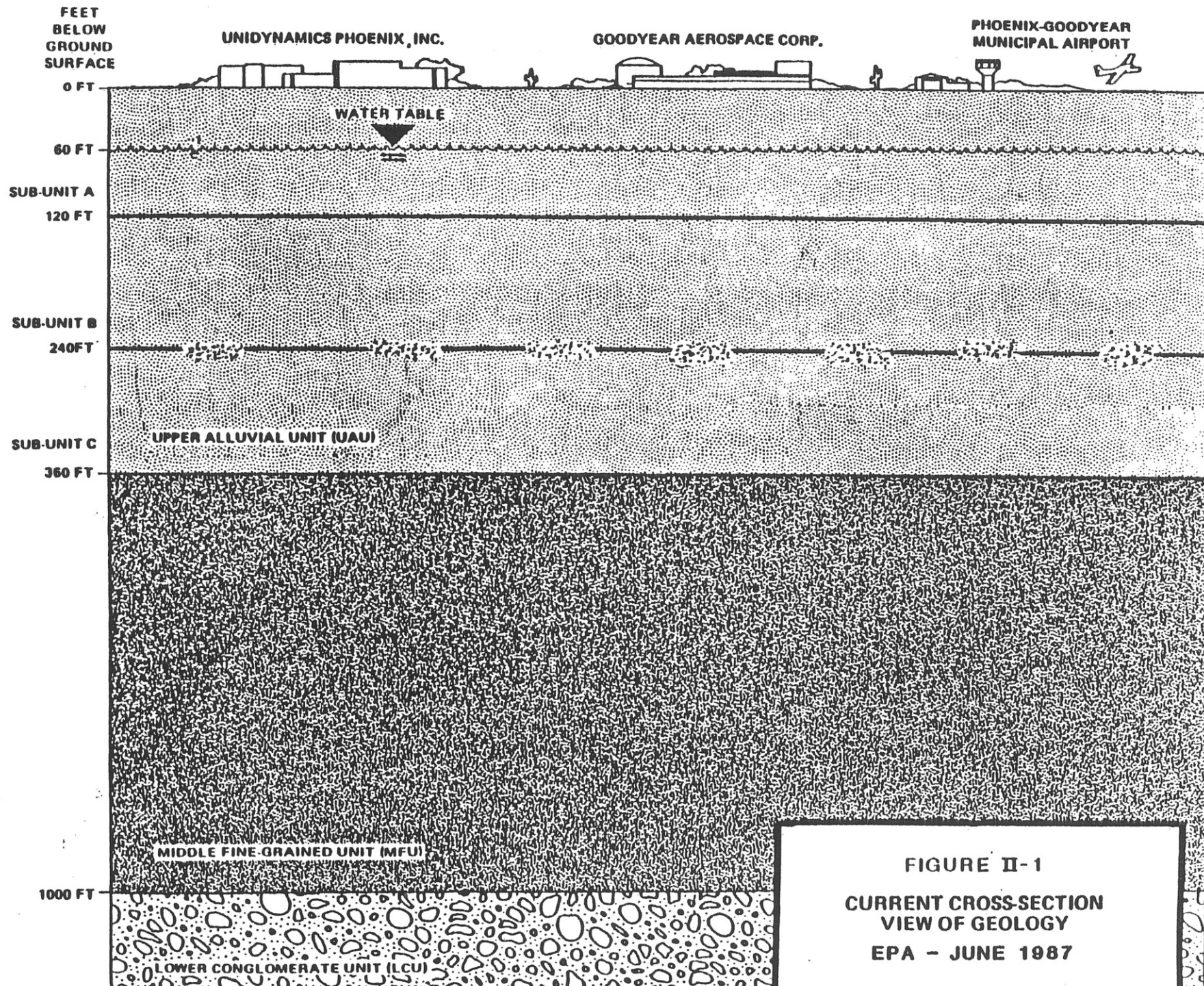


FIGURE II-1  
CURRENT CROSS-SECTION  
VIEW OF GEOLOGY  
EPA - JUNE 1987

W63602.RA



Table 1  
STATE AND FEDERAL  
APPLICABLE OR RELEVANT AND APPROPRIATE REQUIREMENTS<sup>a</sup> AND OTHER CRITERIA  
(concentrations in ppb)

Compound	SDWA MCL	SDWA MCLG	Proposed MCL	Proposed MCLG	AWQC Drinking Water Only	ADHS Action Level	Treatment Plant Discharge Level
Trichloroethylene	5	0					
1,1,1-Trichloroethane	200	200				5	5
1,1-Dichloroethylene	7	7				200	200
Perchloroethylene						1	7
Trans-1,2-dichloroethylene			70	0		3	3
Carbon tetrachloride	5	0					70
Chloroform <sup>b</sup>						1	5
Chromium	50			120	0.5		0.5
Arsenic	50			50			50

<sup>a</sup> Clean Water Act requirements will be determined during NPDES review.

<sup>b</sup> Source is not a byproduct of municipal water supply chlorination.

NOTES: ADHS--Arizona Department of Health Services  
AWQC--Ambient Water Quality Criteria  
MCL---Maximum Contaminant Level  
MCLG--Maximum Contaminant Level Goal  
SDWA--Safe Drinking Water Act  
DW--Drinking Water

Sources: U.S. EPA 1986. Public Health Assessment Manual  
ADHS 1987. S. Eberhart

RD/R56/057-4

**TABLE 1-1**  
**SUBUNIT A CLEANUP LEVELS<sup>a</sup> (concentration in ug/L)**

Compound	Cleanup Level
Trichloroethylene*	5
1,1,1-Trichloroethane*	200
1,1-Dichloroethylene*	7
Perchloroethylene*	3
Trans-1,2-dichloroethylene*	70
Carbon tetrachloride*	5
Chloroform*	100 <sup>b</sup>
Chromium*	50
Arsenic*	50
1,2-Dichloropropane	1
Toluene	340
Trichlorofluoromethane	1
Methylene Chloride	1
Methyl Ethyl Ketone	350 <sup>c</sup>
Xylenes	440
Acetone	700 <sup>d</sup>
Antimony	1.46
Barium	1,000
Beryllium	0.0039
Cadmium	10
Lead	50
Mercury	2
Nickel	15.4
Selenium	10
Silver	50
Zinc	5,000

<sup>a</sup>Cleanup Levels from both Table 1 in 1987 Record of Decision and Table 2-5 in 1989 Record of Decision.

<sup>b</sup>The chloroform levels in the two RODs are different. By agreement with EPA, the higher number is used here.

<sup>c</sup>Revised Cleanup Level from January 1991 ESD.

<sup>d</sup>Added in January 1991 ESD

\*Subunit A Target Analytes from Table 1 in 1987 Record of Decision.

#### ATTACHMENT #4

A list of the EPA-approved Remedial Design documents applicable to the PGA-south Subunit A Groundwater Operable Unit.

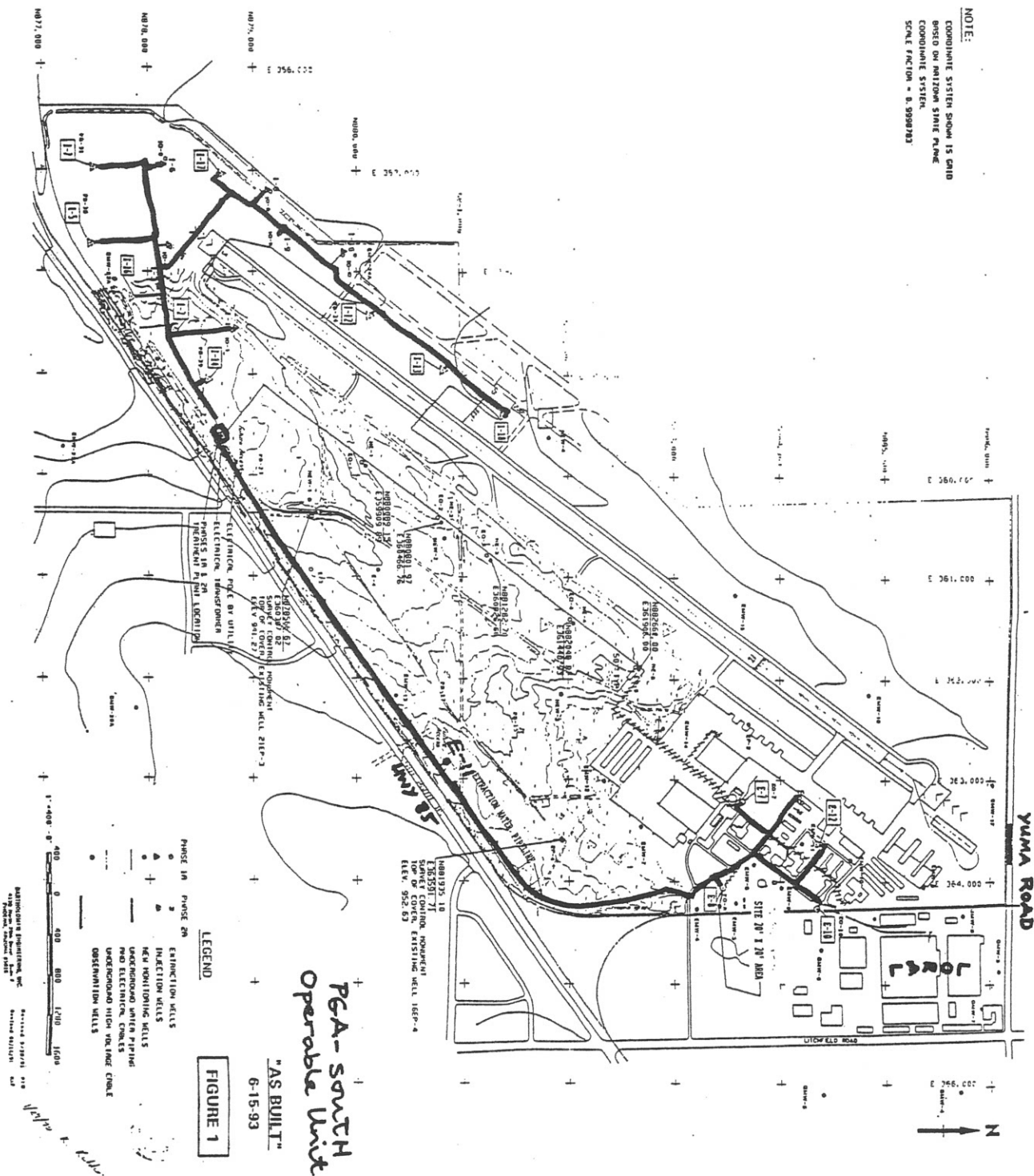
##### Phase 1

- Final Draft Design and Specifications; PGA Operable Unit Treatment Plant; Design Analyses. Six Volumes, . January 11, 1989

##### Phase 2

- Phase II Work Plan; Groundwater Injection Wells; Subunit A Operable Unit; Phoenix-Goodyear Airport Superfund Site; Goodyear, Arizona. One Volume. November 5, 1991.

- Phase II Work Plan; Groundwater Extraction Wells (north); Subunit A Operable Unit; Phoenix-Goodyear Airport Superfund Site; Goodyear, Arizona. One Volume. November 18, 1991.



PROPERTY OF		SITE				SITE				SITE				SITE				SITE				
NAME		PROPERTY	ADDRESS	CITY	STATE	PROPERTY	ADDRESS	CITY	STATE	PROPERTY	ADDRESS	CITY	STATE	PROPERTY	ADDRESS	CITY	STATE	PROPERTY	ADDRESS	CITY	STATE	
THE GOODYEAR TIRE & RUBBER COMPANY, WARREN, OHIO																						
REVISION		DATE	BY	REASON	DATE	BY	REASON	DATE	BY	REASON	DATE	BY	REASON	DATE	BY	REASON	DATE	BY	REASON	DATE	BY	REASON
101120-2	11/15/80	1:24 PM	B. L. B. L.	1.4.1																		
TITLE		PHOENIX-GOODYEAR AIRPORT SUPERFUND SITE				10-10-0102																
SITE PLAN																						

#### ATTACHMENT #6

A list of the EPA-approved Operation and Maintenance (O&M) documents applicable to the PGA-south Subunit A Groundwater Operable Unit. Together these documents constitute the Final O&M Manual.

- Operation and Maintenance Manual, Phoenix-Goodyear Airport, Operable Unit 16, Phase I -Subunit A (Phase I O&M Manual) dated April 20, 1991.
- Operation and Maintenance Manual, Phoenix-Goodyear Airport, Operable Unit 16, Phase II -Subunit A (Phase II O&M Manual) dated January 15, 1993 and revised June 14, 1993.
- Final Monitoring Plan; Phoenix-Goodyear Airport; Operable Unit 16, Subunits A and B/C dated April 1992.



TABLE 4-5

**PHASE I AND PHASE II - SUBUNIT A  
AND SUBUNIT B/C**

**SAMPLING FREQUENCY FOR MONITORING BEGINNING JANUARY 1, 1990**

Well Type/Operation	Measurement	Frequency
A: Monitoring/Observation/ Injection	Water Level	Daily: First 2 weeks Weekly: Next 2 weeks Monthly: Thereafter
B/C: All Wells	Water Level <sup>(1)</sup>	Semiannually
A: Monitoring/Extraction	Analyses <sup>(2)(3)</sup>	Monthly: First year Quarterly: Thereafter
B/C: All Wells	Analyses <sup>(1)(4)(5)</sup>	Semiannually
Plant Influent	All Analyses <sup>(6)</sup>	Weekly: First month Monthly: Thereafter <sup>(7)</sup>
Plant Effluent	All Analyses <sup>(6)(8)</sup>	Weekly: First month Monthly: Thereafter <sup>(7)</sup>

- (1) Except the Phillips well, which will be sampled annually, in July.
- (2) The analyses include pH, temperature, conductivity, total dissolved solids, VOCs for the wells listed in Table 4-1, along with chromium and arsenic on an annual basis in wells EMW-3, EMW-4, E-10, GP-1, and GMW-4.
- (3) The City of Phoenix will collect samples from the wells listed in Table 4-3. Samples will be analyzed for VOCs, BTEX, and TPH using Methods 8010, 8020 and Modified 8015. Data for these wells will be reported to EPA by Goodyear.
- (4) The analyses include pH, temperature, conductivity, total dissolved solids, VOCs for the wells listed in Table 4-2.
- (5) The B/C wells will be monitored on a semiannual basis until the plume has been defined. Following implementation of the B/C remedy system, sampling will be conducted monthly for the first year and quarterly thereafter.
- (6) pH, temperature, conductivity, total dissolved solids, 8010, 8020 and Modified 8015.
- (7) Frequency will be increased when new extraction wells are added: within 24 hours and within one week, 24 hour turn around.
- (8) In addition, an annual analysis for chromium and arsenic will be performed.



A PROFESSIONAL SERVICES ORGANIZATION

**URS CONSULTANTS**

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PHOENIX	VIRGINIA BEACH
LAS VEGAS	NEWPORT BEACH

April 20, 1993

Mr. Craig Cooper (H-7-2)  
U.S. Environmental Protection Agency  
Region IX  
75 Hawthorne Street  
San Francisco, CA 94105

62192.70.41.3551  
01.b1

Subject: Contract No. 68-W9-0054 / WA No. 54-12-9P19  
Phoenix/Goodyear Airport Superfund Site  
PGA South - O&M Audit

Dear Mr. Cooper:

In response to your request, URS has completed an O&M audit of the PGA South ground water treatment system on March 11, 1993. The attached checklist documents the audit.

If you would like to discuss the checklist or need more information, please call me at (916) 929-2346.

Sincerely,

URS CONSULTANTS, INC.

Lawrence D. Smith, P.E.  
Site Manager

LDS/dlc

Attachment

(62190-F/L042093.lids)

**URS Consultants, Inc.**  
**PGA South**  
**Operations and Maintenance Audit**  
**Checklist**

**1. Project Documents** - Are the following documents on site in good condition for use by treatment plant operators? Are the documents the latest revision and complete?

☐ Operations & Maintenance Manual

The O&M Manual is onsite. The manual was dated June 1990 and appeared to contain revisions that had been made since the manual date.

☐ As-built Drawings

A full set of final as-built drawings for all phases were located in the treatment plant control room.

☐ Sampling Plan

The Monitoring Plan which includes the Sample Plan, Emergency Response Plan and the QA/QC Plan were not onsite. Dick indicated that the sampling activities were conducted out of his office in Phoenix and that was where the sampling documents were located.

☐ Health and Safety Plan

A copy of the Health and Safety dated September 11, 1991 with the May 13, 1992 revisions were located in the treatment plat control room.

☐ Emergency Response Plan

See Sampling Plan comments above. This plan should be located at the treatment plant because it relates to emergencies at the plant.

☐ Quality Assurance / Quality Control Plan

See Sampling Plan comments above.

**2. Physical Plant Condition** - Is the treatment plant maintained in a good safe condition? Are alarm systems operating? Do warning lights work?

☐ System Leaks

There were no visible leaks in any piping systems or equipment.

☐ Corrosion

There was extensive corrosion in the concrete secondary containment for the acid tank. The acid feed piping was also corroded. Dick indicated that vendors had been selected to install a liner in the containment structure and that he was going to replace the acid feed plumbing with materials that could better withstand the acid in the system.

☐ Alarm Systems

All control panel warning lights and alarm systems were in working order. Dick simulated a power failure and the treatment system shut down properly. The automatic phone dialer called to indicate the failure. When power was restored the system restarted itself properly.

☐ Other

The treatment plant was generally in very good condition.

**3. Health and Safety** - Are health and safety equipment on site and in operating order? Are chemical and other items stored safely?

☐ Eyewash System

The eyewash system functioned properly.

☐ Chemical Storage

Few chemicals were stored onsite. Small volumes of sample preservatives and calibration solutions for testing equipment were located in the control room. These chemicals were stored safely.

☐ Other

Personal protection equipment was stored in the control room and included Tyvek and acid suits; hard hats and respirators. Fire extinguishers were also stored in the control room.

**4. O&M Reports and Documentation** - Have the following inspections and reports been completed? See attached forms.

☐ Weekly Inspection Check List

I randomly checked both monthly and weekly inspection reports that were kept in binders in the control room. Reports from 1/22/90 to 12/29/92 were present. Dick indicated that the 1993 reports were in his office in Phoenix. The operators inspection and maintenance logs were at the site.

☐ Monthly Inspection Check List

See above

☐ Quarterly Water Quality Sampling Sheets

All water sampling records were stored at Dick's office in Phoenix.

☐ Semi-annual Water Quality Sampling Sheets (Subunit B/C)

All water sampling records were stored at Dick's office in Phoenix.

☐ Carbon Adsorption Unit System Report

Dick indicated these reports were in his Phoenix office.



5. **Spare Parts** - Are the spare parts listed on Table 5-1 present on site for use if needed? See attached Table 5-1 Spare Parts List.

**Comments** - Spare parts were stored in a metal shed at the treatment plant. The parts were randomly store and there was no inventory so we couldn't check against the list in the O&M Manual. Dick told me he would inventory all of the spare parts and develop a new list that would be stored onsite.

### **Instrumentation**

- ☐ Electrode Switches

See above comments

- ☐ Vortex Flow meters

See above comments

- ☐ Level Indicators

See above comments

- ☐ Flow Switches

See above comments

- ☐ Pressure Gages

See above comments

- ☐ Differential Flow Transmitter

See above comments

### Miscellaneous Equipment

- ☐ Metering Pump Repair Kit

An extra acid feed pump was onsite.

- ☐ Injection Pump Packing

See above comments

- ☐ Extraction Pumps

See above comments

- ☐ Well Screen

See above comments

- ☐ Acid Tank Breather Desiccant

### 5. Spare Parts (Cont.)

- ☐ Cable

See above comments

- ☐ Cartridge Fuses

See above comments

- ☐ Glass Fuses

See above comments